

Safety Review/Advisory Committee

April 17, 2009

10:00 AM – 12:00 PM

Minutes

Committee Member	Representing	Present
Banda, Michael J.	Computing Sciences Directorate	
Bello, Madelyn	Human Resources Advisor	
Blodgett, Paul M.	Environment, Health and Safety Division	X
Dubon, Oscar	Materials Sciences Division	
Kadel, Richard W.	Physics Division	X
Kostecki, Robert	Environmental Energy Technologies Division	X
Leitner, Daniela	Nuclear Science Division	*
Li, Derun	Accelerator & Fusion Research Division	
Lucas, Donald	Safety Review Committee Chair	X
Lukens Jr., Wayne W.	Chemical Sciences Division	X
Martin, Michael C.	Advanced Light Source Division	X
Nakagawa, Seiji	Earth Sciences Division	X
Ohearn, Jerry	Facilities Division	
Petzold, Christopher J.	Physical Biosciences Division	X
Pollard, Martin	Genomics Division	X
Sopher, Ted	Information Technology Division	**
Taylor, Scott E.	Life Sciences Division	***
Thomas, Patricia M.	Safety Review Committee Secretary	X
Twohey, Daniel	Directorate/Operations	X
Wong, Weyland	Engineering Division	X

Others Present: Kim Abbott, Paul Alivisatos, Fred Angliss, ** M.S. Bennett (for Ted Sopher), John Chernowski, Rob Connelly, Brandon De Francisci, *Brian Fujikawa (for Daniela Leitner), Donald DePaolo, Vivi Fissekidou, Mike Kritscher, Jim Krupnick, Ernest Majer, ***Andrew Peterson (for Scott Taylor), Eddy Rubin, Mike Ruggieri, Bill Wells

Lab Management Input – Paul Alivisatos and Jim Krupnick

Jim Krupnick asked for comments on the draft charter for the Safety Advisory Committee. He would like to have a final charter in place and the new Chair appointed before the next Committee meeting. Don Lucas requested that the draft charter be posted in the PUB-3000 e-room.

Paul Alivisatos described his concerns about the recent incident involving a guest postdoc in Bldg. 66 who created an explosion by pouring alcohol into aqua regia, resulting in a pressure build-up inside the capped glass container. Fortunately, no one was present when the explosion occurred. An investigation is in progress. It is very clear that if the

person had completed the appropriate training and remembered it, the incident would have been prevented. Dr. Alivisatos asked the Committee to explore whether there is an engineering control that could prevent similar incidents. A pressure relief cap might have prevented the explosion; however, there are regulations requiring closed containers for hazardous wastes to prevent “treatment” by evaporation that could be a barrier. He asked for input as to whether LBNL should request a change to the regulations. A color-coding system for container caps was also suggested for consideration. Don Lucas will ask for volunteers from the Committee and Environment, Health, and Safety Division (EHS) subject matter experts to form a subcommittee to look into the issue and provide recommendations.

Jim Krupnick requested comments on the reporting structure for the Committee. The proposal is to have the Committee report to the EHS Division Director. Wayne Lukens said that there may be a conflict of interest if the Committee is to act as a check and balance to EHS. Don Lucas said that the Committee should become involved at an earlier stage of policy development, and that there will be more subcommittees. Jim Krupnick agreed that Committee members will be expected to be more active, and should be prepared for a time commitment of 1-2 days / month. This was discussed at the Division Directors’ meeting and there were no objections. Richard Kadel commented that the proposed organization charts were confusing as to the roles and responsibilities and lines of authority, and asked for clarification.

Don Lucas said that there might be a possible conflict between reporting to the EHS Director and performing MESH reviews of the EHS Division. As a result of the Health, Safety, and Security (HSS) review, LBNL plans to review our self-assessment systems, including Management of Environment, Safety and Health (MESH) reviews. In a prior review, MESH was noted as a best practice.

Another HSS finding was about the confusing hierarchy of documents. Michael Martin asked for clarification about what policies the Committee would be asked to look at and provide advice. Jim Krupnick said that LBNL needs to ensure that all policies make sense and that the implementation is workable. Paul Alivisatos agreed that he needs to know about all concerns, and no categories of ES&H policies are off limits. The Committee’s role will be advisory, not approval.

Earth Sciences Division MESH Response – Donald DePaolo

Don DePaolo presented Earth Sciences Division’s safety mission statement and showed examples of safety information available on their website. The Division has about 200 people (about 160 full-time staff). They are organized into 5 departments, and also by research programs, facilities and centers. Like many LBNL divisions, Earth Sciences is geographically dispersed, having operations in Buildings 14, 64, 70/70A, 90, and storage in Blackberry Canyon. There are also off-site projects. Each lab space and off-site project has a Principal Investigator (PI) designated as the safety lead, who reports to a department head or project leader. The division director is expected to do an annual safety walkthrough, the department heads do biannual walkthroughs, and PIs do monthly

walkthroughs. Supervisors meet with each person assigned to them at least twice a year, and the meeting includes review and update of the Job Hazards Analysis (JHA). The division safety committee includes department heads and representatives from each department to cover all types of work performed in the Division. They have safety resources posted on their web site.

The MESH report noted 5 Noteworthy Practices:

- Sharing and feedback of safety information through Earth Sciences communications structure;
- Effective and well-maintained web site;
- Clear line management authority and responsibilities;
- Lab safety documentation was up-to-date and readily produced;
- The Bldg. 64 shop was well controlled.

The MESH report found 2 Concerns:

- Two new employees did not fully understand Integrated Safety Management (ISM) concepts. The Division Safety Coordinator is meeting with new people monthly to discuss ISM and explain the division safety systems. New people also meet with their lead PI to discuss hazards and controls.
- There were a few housekeeping problems in lab areas. The walkthrough checklists are being revised to highlight housekeeping.

There were also 3 Observations:

- There were two recordable injuries outside Earth Sciences space and unrelated to Division work activities – a trip and fall at the cafeteria and flying debris striking an employee while walking between buildings. There has been one first aid injury. Accidents are addressed through the Supervisors Accident Analysis Report (SAAR) and Corrective Action Tracking (CATS) systems.
- The scope and frequency walkthroughs was not clear to the review team, and they were not sure how results of walkthroughs were managed. There is now an inspection log, which is reviewed by the Department Head and Safety Coordinator.
- It was not clear how much safety performance affects performance reviews. Safety is discussed in mid-year reviews as well as the annual reviews. Division management is discussing the Performance Review and Development (PRD) criteria with Human Resources (HR) and has asked for more emphasis on safety on the PRD form. There are some HR concerns about punitive measures. The Division has no history of “problem people” – most people do a solid job, with few examples of non-compliance.

Don DePaolo commented that his greatest fear is that someone may receive insufficient training. The Division depends on their PIs to determine what training is sufficient before allowing people to work without direct supervision. Division Safety Coordinator Vivi Fissekidou added that they have discussed the importance of training at their Division Council meetings and have increased their training compliance.

Weyland Wong and Robert Kostecki performed the MESH review. They found Earth Sciences Division to be very co-operative in providing requested documentation. The review team selected the areas to visit. They found strong evidence that safety processes are in place. The only gaps in knowledge they found were for a new employee who had been at LBNL about a week and a guest who had been at LBNL for a couple of months. Weyland recommended that other divisions look at the Earth Sciences website.

Don DePaolo and Ernie Majer concluded that the lab stand-downs they held in the fall of 2008 were effective in improving attitudes. There may be a few weak spots, but generally the controls are in place. People are following the new policies, even if they don't always agree with them. The greatest challenge is that some people have too many things to do, and it is difficult for them to keep up with all the requirements at LBNL and on campus.

Genomics Division MESH Response – Eddy Rubin

Genomics Division has about 280 people, including 250 at the Joint Genome Institute (JGI) in Walnut Creek, 20 in Bldg. 84 and 5 on campus.

There are both Lawrence Livermore and Berkeley Lab people in Walnut Creek. Berkeley Lab leads the safety program, through a Memorandum of Understanding (MOU) with Lawrence Livermore National Laboratory (LLNL). The work at JGI is divided into production, informatics, and research labs. Each type of work has different hazards. There is a full-time ergonomist, Division Safety Coordinator, Assistant Division Safety Coordinator, and Administrator. The JGI staff also manages the environmental permits for the facility.

The MESH report describes 4 Concerns:

- Life Sciences management of safety in Bldg. 84 was not documented in the Life Sciences Division (LSD) ISM Plan. This has now been documented in an MOU and the LSD ISM Plan.
- UC management of safety for the computational group on campus should be described in the Genomics ISM Plan and/or an MOU. A description of the safety systems for this group is being added to the ISM Plan.
- Division management should perform walkthroughs of campus space. Genomics Division management will be doing quarterly walkthroughs. The University of California (UC) has been very cooperative.
- JGI had Satellite Accumulation Area (SAA) compliance issues. SAAs are checked monthly by area safety leaders and during weekly Division Safety Coordinator walkthroughs of labs. EHS developing a presentation for laboratory workers on how to manage SAAs.

The MESH report describes 3 Observations:

- The Bldg. 84 representative was frequently unable to attend safety meetings due to schedule conflicts. A new representative who works at both Bldg. 84 and JGI has been selected and is attending meetings.

- There was a high ergonomic injury rate in the Informatics Department. The ergonomics support has been increased, and assistance is being provided to people at medium/high risk or who have discomfort. RSI Guard has been installed on all computers. They have also made improvements in management structure and morale issues, as these were causing stress that may contribute to ergonomic injuries.
- Workers asked for more feedback from management. Communication can be improved by using existing methods. The Safety Culture Group has been expanded. There is an anonymous safety issue tracking system and managers are responding to concerns. An all-hands meeting is planned for every two months.

There were 4 Noteworthy Practices:

- There was a Safety Stand-down during December 2007 – January 2008. Both safety and management issues were evaluated and improved. Accident rates have improved. There has been only one recordable injury in the first half of this fiscal year.
- JGI has a customized safety program, including a hazards analysis process, training classes, and tools. JGI has a unique environment. The production operations are more like an industrial facility. They have developed customized ergonomic solutions, and won an “Ergo Cup” award.
- Workers are involved in the safety subcommittee. There is an ergonomics working group that has helped to instill a deep awareness of ergonomics among workers. There is also a Safety Culture Group and an Emergency Response Group. There are monthly Area Safety Leader group meetings. There are employee-led safety activities, such as a Safety Fair.
- Monthly walkthroughs are performed, with minor issues recorded in the Safety Track system. This system is easier to use than CATS.

Seiji Nakagawa and Richard Kadel were on the MESH review team. Seiji Nakagawa commented that they were quite impressed with the very systematic safety program, including the ISM hazard evaluation forms. There was good cooperation between Genomics and Life Sciences – LSD has “adopted” the JGI staff into their Bldg. 84 safety program, and an MOU has been drafted. Richard Kadel commented that the safety stand-down was very well done, and involved Human Resources, LLNL, and all the JGI workers.

Eddy Rubin responded that the Division Safety Team want to sustain the momentum developed during the HSS audit. JGI has been working on integrating the JGI research group into the site-wide practices. They have brought in an ergonomist with a background in psychology and human factors. Engineering controls are only part of the solution to ergonomic problems. They also talk about the work environment and structure. Workers need to understand the potential long-term consequences of ergonomic injuries. Early detection is important. There is an ergonomic case review meeting every other week with supervisors and ergonomists.

Chairman's Comments – Don Lucas

HSS status – The final report from the audit was approved by the Department of Energy (DOE) yesterday. LBNL has 60 days to produce an approved Corrective Action Plan. The CAP teams have completed their “5-Whys” causal analysis, and are starting to develop corrective actions. The Steering Committee wants to engage interested LBNL people in the process. There will be a special Safety Coordinator’s meeting from 9:00 AM – noon on Friday, April 24th, in Perseverance Hall, to discuss the draft corrective actions. Richard DeBusk is putting together an agenda for the meeting, so people can come for just their areas of interest. The goal is to have a 90% draft complete by May 11 for LBNL management to present to DOE. Information is being posted on the “Our Safety” website, under “HSS Safety Audit Site”, “Information for Divisions”:
http://www.lbl.gov/ehs/ism/2009/info_divisions.shtml

Some corrective actions will involve this Committee in document development and communication. It will take years to complete all the corrective actions. LBNL is looking at what other labs have done.

Plans are being made for people from the divisions that experienced the HSS review to share their experience with the other divisions. Teams of 3 people, also including a McCallum/Turner consultant and an LBNL counterpart, will be conducting HSS mini-reviews, spending one day with each division.

Minor revisions to PUB-3000 –

- Chapter 10 Construction Safety Manual Administrative Policies – There were minor text changes throughout to align PUB-3000 with Cal/OSHA regulations, which contractors are accustomed to follow. Appendix C Fall Protection was deleted, as this information had been transferred to Appendix A a few months ago.
- Chapter 11 Environmental Protection - Minor changes were made throughout to align PUB-3000 with current regulatory language and fix broken hyperlinks.
- Chapter 32 Job Hazards Analysis - Minor changes were made throughout to match text with current practice.

In addition, changes to Chapter 12 Fire Prevention and Protection were published March 9 due to a Corrective Action Plan deadline.

PUB-3000, Chapter 23, Seismic Safety – Fred Angliss

The purpose of the proposed changes to Section 23.2.2 Design Criteria for Programmatic Facilities is to bring PUB-3000 into conformance with January 2008 Building Code changes. Permanent (≥ 180 days) attachment of non-structural components to building structures (floors, ceilings, walls) must be in accordance with the Building Code. There are code requirements for concrete anchors. Someone has to do calculations to document the adequacy of the planned anchoring method. Facilities must review the type of

anchors to be used. For example, anchoring of the new test stand in Bldg. 16 was discussed with Fred Angliss. Equipment that was previously installed in compliance with the Building Code that was in effect at the time of installation does not have to be reviewed. If old equipment is to be moved and re-anchored, it needs to comply with the new Code. When seismic bracing requests are submitted through the Work Request Center, Facilities staff will perform the evaluation automatically.

There was a question about whether electrically powered equipment that is seismically braced, such as refrigerators and drill presses, is required to be hard wired. This would be discussed in the Electrical Code requirements.

The Advanced Light Source has used Hilte drop-in anchors in the past that will not meet the new Code. This is being looked at. There are some rated anchors available.

There was a question about whether there are sufficient resources to perform the reviews. Fred Angliss has subcontractor support when needed.

There was a question about the best way to communicate the requirements. A “Today at Berkeley Lab” article and/or Level 1 announcement were suggested. The changes should be discussed at safety committee meetings. It is important to get the information to technicians and Principal Investigators.

Committee members had no objections to the proposed changes.

Proposed Policy on Transportation of Research Samples – Don Lucas

There was a question about whether the proposed policy would apply to biomaterials. There will be no restrictions on transporting non-infections biomaterials. The policy will be clarified.

Don Lucas is not sure where the final policy will be published. This will be discussed at the next meeting. This policy needs to be coordinated with the shipping policy, and a separate section on nanomaterials that is required by DOE orders.

People are not allowed to take their samples or other hazardous materials to Shipping. They must call Transportation. This is because Department of Transportation regulations require that only DOE-trained people handle materials intended for shipment. There is no de minimis quantity. This would include shipping lead bricks. The only exception is for remote locations that a common carrier does not serve.

There were questions about how to transport liquid nitrogen and samples under liquid nitrogen, and how to transport magnets. Gale Moline will be the EHS Subject Matter Expert to answer questions about requirements for specific types of materials. LBNL Transportation is also a good source of information. There was a comment that it is important to have timely response to questions and transportation requests.

New shipping documents are being developed. There will be further discussion at the next meeting.

The meeting was adjourned at 11:45 AM

Respectfully submitted, Patricia M. Thomas, SRC Secretary